

ABSTRACT OF THE DISCLOSURE

A system and method prevents the formation of loops that are not detected by the Spanning Tree Protocol (STP). An intermediate network device preferably includes a plurality of ports for receiving and forwarding network messages and a STP engine in communicating relationship with the ports. The STP engine transitions the ports among a plurality of spanning tree port states, including a discarding state, a learning state and a forwarding state. The device further includes a loop guard engine that is in communicating relationship with the STP engine and the ports. The loop guard engine monitors the receipt of configuration bridge protocol data unit (BPDU) messages by the ports. If a given port stops receiving BPDU messages, the loop guard engine prevents the STP engine from transitioning the given port to the forwarding state. Instead, the loop guard engine preferably causes the port to transition to a new state in which networks messages are explicitly blocked from being forwarded or received. If the given port subsequently receives a BPDU message, the loop guard engine releases the port from the new state, thereby allowing it to transition to some other spanning tree port state.